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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/348,320	07/07/99	PIERONI K	CHMP-102

MMC1/0420

MORLAND C FISHER
2030 MAIN STREET SUITE 1050
IRVINE CA 92614

EXAMINER
GARBER,C

ART UNIT	PAPER NUMBER
2856	

DATE MAILED: 04/20/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/348,320	PIERONI ET AL.	
	Examiner	Art Unit	
	Charles D. Garber	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 July 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 19-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 19-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15)☒ Notice of References Cited (PTO-892)
16)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18)☐ Interview Summary (PTO-413) Paper No(s). _____ .
19)☐ Notice of Informal Patent Application (PTO-152)
20)☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 and added claims 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Pieroni et al.

Pieroni et al. disclose a smoke producing apparatus and operation for detecting leaks in a fluid system including a smoke producing chamber 1, a fluid supply 2, a heating grid 4 shown in figures 1 and 5 to be within the chamber, a gas inlet tube 16 with orifice 18 for blowing gas and fluid mixture against the heating grid energized by DC current (column 3 line 66 to column 4 line 10), an air outlet 14 for removing the exiting smoke (column 3 lines 16-23), and a source of air 25 which is non-flammable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 3 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieroni et al. in view of Gouge and Brayman et al.

Regarding claim 2 and added claim 20, Pieroni et al. as discussed above disclose all the limitations as in the instant invention except for expressly teaching the gas is Nitrogen.

Gouge discloses a device and method for smoke testing of gas furnace heat exchangers (title) with many of the same limitations as the instant invention including " the generator having: a smoke chamber housing having upper and lower portions; at

least one heating element in the upper portion of the smoke chamber housing; a pump which supplies a gas to the smoke chamber housing; a liquid which fills the lower portion of the smoke chamber housing, wherein the at least one heating element is suspended above the liquid; an applicator of liquid to the at least one heating element; and a smoke vent in the upper portion of the smoke chamber housing" (abstract) " wherein said liquid comprises oil" (claim 4) that teaches the gas is "pressurized carrier gas" (claim 1). Gouge however does not specify a suitable carrier gas. Brayman et al. disclose an apparatus and method for leak testing automotive wheel rims. Brayman et al. teach "...any of a range of trace gas concentration ... mixed with suitable carrier gas such as air, or nitrogen, as required for the particular application, and the particular trace gas sensor utilized" (column 8 lines 12-16).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to advantageously use a carrier gas to carry smoke from a smoke generator as taught by Gouge and that a suitable carrier gas is air or nitrogen as taught by Brayman et al.

As for claim 3, Pieroni et al. further disclose an air inlet tube 16 shown in figure 1 and 5 extending through and above the fluid supply 2 as in the instant invention. The tube also blows a mixture of gas and fluid against the heating grid 4 as in the instant invention (column 3 line 66 to column 4 line 10).

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pieroni et al. in view of Malcosky et al.

Pieroni et al. as discussed above disclose all the limitations as in the instant invention except for expressly teaching monitoring the pressure within said smoke outlet of said smoke producing chamber and discharging said pressure to the atmosphere when said pressure exceed a predetermined pressure level

Malcosky discloses an apparatus for injecting tracer gas into a pipeline. The reference teaches relief valves 108 or 122 in the lines 104 or 118 carrying tracer compounds to a pipeline 136 under test (see figure 1 and column 9 lines 10-30). Relief valves are well known to discharge pressure at a predetermined pressure level.

The claim recitation "monitoring the pressure within said smoke outlet of said smoke producing chamber and discharging said pressure to the atmosphere when said pressure exceed a predetermined pressure level" is only supported in the specification insofar as pressure check valve 40 of the instant invention will "crack" at about 1 PSI and vent to atmosphere via an orifice. Pressure "monitoring" would ordinarily be associated with some sort of pressure sensing, measuring or displaying means. There was no pressure sensing, measuring or displaying means associated with the disclosed vent so the recitation appears to be directed simply to a relief valve of some sort.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a relief or pressure check valve in order to prevent pressure build up that may effect proper operation of fluid systems as is widely known in the art.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pieroni et al. as modified by Malcosky et al. and applied to claim 22 above and further in view of Seelback

Pieroni et al. as modified by Malcosky et al teach all the limitations as in the instant invention except for expressly teaching an accumulator between the smoke generator outlet and atmosphere, wherein the accumulator condenses and collects the smoke.

Seelback discloses a method and apparatus for smoke treating foodstuffs wherein there is taught a condenser 160 between the smoke chamber 10 and vent 169 for condensing the smoke.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to condense waste smoke so that obscuring smoke is not dumped into the environment.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pieroni et al. in view of Ireland et al.

Pieroni et al. disclose all the limitations as in the instant invention except for expressly teaching monitoring the presence of gas, energizing the heating grid when the gas is present and de-energizing the grid when the gas is absent. The specification does not actually disclose presence or absence of gas, only that a pressure switch energizes or de-energizes when the pressure changes from a normal condition wherein the device is normally at atmospheric pressure or slightly above (by virtue of the

pressure check valve 40 if the line to system under test 4 is somehow blocked) to a higher pressure from the gas source 25 or 60. This implies that some residual gas will always be present in the line at or near atmospheric pressure.

Ireland et al. (Ireland) disclose a heating element for heating fluids, either gases or liquids wherein the element is a wire mesh 1. Ireland teaches "Mesh failure due to flow restriction may be prevented by the use of a pressure actuated switch which only permits current to be supplied to the mesh when the pressure difference across the mesh faces, caused by the flow through the mesh, exceeds a prescribed value." (column 2 lines 25-31) and "A safety device, for example incorporating a pressure switch as described above, could be fitted to shut off the current supply to the heater in the event of a blockage." (column 6 lines 57-60)

It would have been obvious to one having ordinary skill at the time the invention was made to permit current to the heating element when there is sufficient flow for safety and to prevent failure.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references cited on the accompanying form PTO-892 are listed to show examples of state of the art methods and apparatus for smoke generators, which share one or more features in common with the instant invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Garber whose telephone number is (703) 308-6062. The examiner can normally be reached on 6:30 am - 4:pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7725 for regular communications and (703) 308-7725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

cdg
April 19, 2001

HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
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